



For GreenSpeed Technologies
Golf Cart Industry Synopsis
EXHIBIT A

Golf carts have become a subset of a larger group of vehicles called *Low Speed Vehicles* or LSV.* Golf carts traditionally are vehicles that are restricted in speed to 20 mph (32 km/h). The larger LSV market encompasses all vehicles that can travel up to 25 mph (40 km/h). Therefore, golf carts are a part of the LSV market. Golf carts, just as with any LSV, can be gas or electric powered.

(* It should be noted that another term has become synonymous with the all-electric LSV. That term is *Neighborhood Electric Vehicle* or NEV, which has the same speed criteria. We will still use the term LSV.)

For the most part, governmental bodies are responsible for defining LSV and golf carts. This is due to safety standards and registration requirements. For example, most states allow any LSV (any vehicle that has a maximum speed of 25 mph) to travel any road with a 35-mph speed limit or less. However, there are still safety requirements for LSV's, such as lighting, mirrors, etc. Some states require an LSV to register but not necessarily have a license. Each state and municipality has their own rules. (*See further information on page 2 of this exhibit.*)

Golf carts come under a different set of governmental rules since they have a maximum speed of 20 mph. Golf carts generally can still travel on roads posted with a 35-mph speed limit or less. However, they have less safety requirements and minimal to no registration or license requirements in most states. This can vary even by local town and neighborhoods.

Golf carts are no longer simply a means of transportation on a golf course. We now see growth in demand for use on hotel and resort properties, manufacturing and warehouse plants, beach communities, gated communities, and even any small community or neighborhoods with 35-mph or less speed limits.

The electric golf cart demand is outpacing gas driven carts. It stands to reason given the push towards “green” transportation and overall increasing demand for electric vehicles of any type. Solar charged electric golf cart is another market of its own within the golf cart sector.

GreenSpeed Technologies intends to focus on the all-electric golf cart, both plug-in charging type and solar charged carts. We believe our golf carts will disrupt the industry due to our revolutionary battery technology that offers:

- To be safer than any other battery.
- To be cleaner and environmentally friendly.
- To use no chemicals and only use vastly renewable elements.
- To move a golf cart many more miles per charge.
- To hold more energy than any other battery on the market.
- To last an incredible long life—even the life of the cart.
- To take a charge faster than any other battery.
- To save 100's of pounds in golf cart weight.

Legal Definition Example of LSV and Golf Cart

Florida, USA, is one of the demographics with highest demand for golf carts due in a large part to extensive use in retirement communities, resorts, and beach communities. Each state and county (or city) will have their own definition of an LSV and a golf cart. Florida is a good example of how most states treat these vehicles, with minor differences. Following is Florida's law:

If you are only planning on operating your golf cart on a golf course and on your private property, the Florida Statutes, defines the rules in section 320.01(22) as "a motor vehicle that is designed and manufactured for operation on a golf course for sporting or recreational purposes and that is not capable of exceeding speeds of 20 MPH." Golf carts are allowed to be operated on roadways that are designated for golf carts with a posted speed limit of 30 MPH or less. In the state of Florida, golf carts are NOT required to be registered and titled and there are no requirements to be insured with PIP or PDL coverage. The minimum age requirement to operate a golf cart is 14 years old (a current proposed law will increase that age to 15 or 16 and likely to pass).

However, if you are wanting to legally drive your golf cart on roadways where the posted speed limit is up to 35 MPH, you need to make sure your cart meets the standards of a low-speed vehicle (LSV). An LSV is a vehicle that has a top speed that is greater than 20 MPH and no more than 25 MPH. There are some basic requirements for an LSV to be street legal compliant. Low speed vehicles need to have a Vehicle Identification Number (VIN), to be registered and titled. LSVs must also be insured with personal injury protection (PIP) and property damage liability (PDL). Low speed vehicles are only permitted to operate on streets where the posted speed limit is 35 MPH or less.

LSV Required Safety Equipment Under Florida Law (does not apply to golf carts)

All LSVs must be equipped with the following safety equipment:

- Windshield
- Windshield wipers
- Exterior mirrors (driver side and an interior rear view or passenger side)
- Headlights
- Parking brake
- Front and rear turn signals
- Taillights and brake lights
- Reflectors
- Horn
- Seat belt for each designated seat



For GreenSpeed Technologies
Battery Industry Weakness
EXHIBIT B

The Golf Cart industry is moving more and more towards all electric designs. Nevertheless, most manufacturers still use battery technology that is literally over 150 years old. Why? It's a way to keep the cost down for consumers. Plus, it's simply the way business has been done for decades, and as long as consumers keep buying, why change? A lead-acid battery may have some advantage over many of the new technology batteries in that they are recyclable for the most part. However, with the today's demands put on golf carts (beyond a round of 18 holes at the golf course), the 8-10-mile limit per charge and the slow charging time is creating demand for alternatives.

The most popular alternative battery today is the lithium-ion battery. While it is true that the charging time is reduced and often 80 miles or more can be achieved on one charge with a lithium-ion battery, there are downsides. For the dangers and risks associated with thermal runaway, the news media has provided plenty of true-life examples. *See the media reports below.*

Besides the extreme risk of explosion and fire, lithium batteries suffer a similar problem with all traditional batteries:

- Bell curve voltage availability (thus entire battery charge not truly available).
- Easy to overheat when attempting fast charge.
- Limited life cycles (charge/discharge cycles).
- Lithium and Lithium-Ion batteries use rare earth minerals and chemicals that are difficult to obtain and limited supply.
- Only partially recyclable and re-cycled batteries cannot be recycled again.
- Environmental hazards at end of battery life.

Media Reports of Lithium Battery Dangers

LITHIUM-ION BATTERY FIRES ARE HAPPENING MORE OFTEN, BY SAMANTHA MURPHY KELLY, CNN¹

Lithium-ion batteries, found in many popular consumer products, are under scrutiny again following a massive fire this week in New York City thought to be caused by the battery that powered an electric scooter.

At least seven people have been injured in a five-alarm fire in the Bronx which required the attention of 200 firefighters. ...

"In all of these fires, these lithium-ion fires, it is not a slow burn; there's not a small amount of fire, it literally explodes," FDNY Commissioner Laura Kavanagh told reporters. "It's a tremendous volume of fire as soon as it happens, and it's very difficult to extinguish and so it's particularly dangerous." ...

These incidents are becoming more common for a number of reasons. For starters, lithium-ion batteries are now in numerous consumer tech products, powering laptops, cameras, smartphones and more. They allow companies to squeeze hours of battery life into increasingly slim devices. But a combination of manufacturer issues, misuse and aging batteries can heighten the risk from the batteries, which use flammable materials.

"Lithium batteries are generally safe and unlikely to fail, but only so long as there are no defects and the batteries are not damaged or mistreated," said Steve Kerber, vice president and executive director of Underwriters

¹ S. Kelly. 2023, Mar. 9. *Lithium-ion battery fires are happening more often*. CNN Business. CNN.com.
<https://www.cnn.com/2023/03/09/tech/lithium-ion-battery-fires/index.html#:~:text=All%20lithium%20Dion%20batteries%20use,catastrophic%20explosion%2C%20according%20to%20Khoo>

Laboratory's (UL) Fire Safety Research Institute (FSRI). "The more batteries that surround us the more incidents we will see." ...

Despite the concerns, lithium-ion batteries continue to be prevalent in many of today's most popular gadgets. Some tech companies point to their abilities to charge faster, last longer and pack more power into a lighter package. ...

The problem with lithium batteries

Dylan Khoo, an analyst at tech intelligence firm ABI Research, said electric bikes and scooters use batteries which can be around 50 times larger than the one in a smartphone. "So when a fire does happen, it's much more dangerous," Khoo said.

All lithium-ion batteries use flammable materials, and incidents such as the one in the Bronx are likely the result of "thermal runaway," a chain reaction which can lead to a fire or catastrophic explosion, according to Khoo.

"This process can be triggered by a battery overheating, being punctured, or an electrical fault like a short circuit," Khoo said. "In cases where fires occur spontaneously while charging, it is likely due to manufacturing defects."

According to Kerber, the number of lithium-ion battery-based fires is growing with enormous frequency both in the United States and internationally, particularly when it comes to e-bikes and e-scooters, due to an uptick in purchases of these products during the pandemic.

I-TEAM: LITHIUM-ION BATTERY FIRES ARE HAPPENING. BY LIZ OWENS²

NORTH AUGUSTA, S.C. (WRDW/WAGT) - Faster charging batteries are causing golf cart sales to soar.

Lithium-powered batteries last longer, but they can also become fire hazards. The I-TEAM investigates the risk and what you can do to protect your property.

Take a ride through North Augusta, and you'll find a place where families, friends, and neighbors connect with their community.

"When you're in a golf cart, you're able to interact with your neighbors as you ride by them and speak to them. More so than a car," said Lt. Junior Johnson, North Augusta Public Safety.

New, old, electric, or lead acid, you see all types parked at SRP Park.

According to the South Carolina Department of Motor Vehicles, the demand for golf carts has increased 25 percent over the last few years, but so has concern.

Johnson says North Augusta Public Safety found a golf cart engulfed in flames the day after the tournament.

"We do not know what caused this one. The entire golf cart was destroyed," he said.

The National Fire Protection Agency began warning firefighters of the risks of lithium-ion batteries years ago, but this is a first here.

It's a first for North Augusta Public Safety but not the first in South Carolina.

"If this were to occur inside a garage, it could catch the rest of the house on fire. If it's next near the house, it could also spread to the house," said Johnson. "That battery continues to, even after the fire's out, the battery's chemical reaction will still continue to go on."

Fires involving lithium-ion batteries are intense, fast burning, and difficult to put out.

"This holds 750 gallons of water. We used all of that, and we had to refill it," he said.

... [I]t's the charger that can get you in trouble. -OSHA says a frayed, defective, or damaged charger can spark a fire, even when the battery itself is generally safe.

² L. Owens. 2023, Apr. 13. *I-TEAM: Lithium-ion Battery Fires Are Happening...*; WRDW News 12, CBS affiliate / WAGT News 26, NBC affiliate. WRDW.com. <https://www.wrdw.com/2023/04/13/i-team-lithium-ion-battery-fires-are-happening-heres-how-protect-your-property>

ARE YOU PLAYING WITH FIRE? – GOLF CART SAFETY AND HIDDEN DANGERS, by BORIS ZHADANOVSKIY³

When consumers “plug it in,” therein lies a hidden danger. The batteries that propel golf carts to and fro can turn into serious fire hazards and even explosion hazards if they are charged improperly. The reason? Batteries naturally release hydrogen, a highly flammable gas. The smallest concentrations of hydrogen – between four and seven percent – can cause a deadly boom.

“Golfers may not realize it but their golf carts could be ticking time bombs if they charge them inside a garage,” The Palm Beach Post reports in an article titled “‘The fire hazard no one ever expected’: The hidden, deadly dangers of residential golf carts.” “That’s because golf cart batteries, especially older ones, emit hydrogen, an odorless, colorless gas that is highly flammable.”

Palm Beach County firefighters have seen an uptick in such emergency calls, including one that destroyed a mansion in Addison Reserve Country Club. By the time responders arrived at the scene, the \$1.9 million home was engulfed in flames. Fortunately, there were no injuries.

Palm Beach County Fire Marshal David DeRita told The Palm Beach Post that golf carts never should be charged in a closed garage.

“With hydrogen present, a problem could develop...by even touching the garage door switch or garage door light – all of which work off electricity,” DeRita said.

SEE GOLF CART FLEET ENGULFED IN FLAMES AT SANIBEL GOLF COURSE, BY MARK H. BICKEL⁴

The fleet of golf carts at The Dunes Golf & Tennis Club on Sanibel Island erupted in flames on Friday, Nov. 18.

This was the second time the golf carts have burned since Hurricane Ian hit Southwest Florida on Sept. 28. The fire caused thick, black smoke that could be seen rising into the sky from miles away. ...

Mike Dopsloff, the PGA head professional at The Dunes, said he believes the cause was similar to the Oct. 16 fire involving the golf carts — a chemical reaction between the lithium batteries in the carts and the salt water residue caused by Ian's storm surge, which flooded the golf course.



“Black smoke billows from the location at The Dunes Golf and Tennis Club where the fleet of golf carts are located. The carts were engulfed in flames on November 18, 2022. *Sanibel First Rescue District.*”

³ B. Zhadanovskiy. 2023, Mar. 20. *Are You Playing With Fire? Golf Cart Safety and Hidden Dangers*. Searcylaw.com. <https://www.searcylaw.com/are-you-playing-with-fire-golf-cart-safety-and-hidden-dangers>

⁴ M. H. Bickel. 2022, Nov. 21. *See golf cart fleet engulfed in flames at Sanibel golf course*. Fort Myers News-Press. <https://www.news-press.com/story/news/2022/11/21/sanibel-island-fire-caused-golf-carts-bursting-into-flames-lithium-battery-salt-water-hurricane-ian/10744460002>



For GreenSpeed Technologies

Market Analysis

EXHIBIT D

The Golf Cart Market is segmented by Type (Electric Golf Cart, Gasoline Golf Cart, and Solar Golf Cart), Application Type (Golf, Personal/Residential, and Commercial), and Geography (North America (United States, Canada, Rest of North America), Europe (Germany, United Kingdom, France, Spain, and Rest of Europe), Asia-Pacific (India, China, Japan, South Korea, and Rest of Asia-Pacific), and Rest of the World (Brazil, Saudi Arabia, United Arab Emirates, and Other Countries). GreenSpeed Technology's focus will be electric and solar and focused initially on the U.S. market, which has the largest market share.¹

The Golf Cart industry is in a rapid growth period, and more specifically, the all-electric models are enjoying the highest demand. This trend is expected to stay with us globally for the next decade.² Numerous research organizations have studied the Golf Cart market. The forecasts have a fairly broad range between each research group. The reasons can be many. Not the least of which is it is a fast-expanding market and new data becomes outdated nearly as fast as it comes in. We prefer the growth statistics from one particular organization due to their thoroughness and investigation into each Golf Cart manufacturer and sales organization existing in the world. This company is Coherent Market Insights Pvt. Ltd. ("CMI"). Their most recent study was published with EINPresswire in April 2023.³

CMI's research report employs a range of methodologies and analytics to provide in-depth and trustworthy information on the Golf Cart Market. The study also includes the SWOT and Porter Five Forces analyses, which help in identifying the market's driving and restraining forces. (**SWOT** analysis is a framework for identifying and analyzing an organization's *strengths*, *weaknesses*, *opportunities*, and *threats*. **Porter's Five Forces** is a model that identifies and analyzes five competitive forces that shape every industry and helps determine an industry's weaknesses and strengths: (i) *competition in the industry*, (ii) *potential of new entrants into the industry*, (iii) *power of suppliers*, (iv) *power of customers*, (v) *threat of substitute products*.)⁴

The CMI report is forecasted through 2027 at 6.3 compounded annual growth rate (CAGR). When we look at the latest data across all the relevant market research organizations, we find no indication of any letup in demand for the next decade. Therefore, we use CMI's CAGR rate of 6.3% to carry our forecast out to 2030, which is how we arrive at over \$6.7 billion in market size at that point.

Competitors and Capturing OEM and Aftermarket Battery Market

¹ Mordor Intelligence. *Golf Cart Market Size & Share Analysis—Growth Trends & Forecasts (2023 - 2028)*.

² Global Market Insights. 2023, April. *Golf Cart Market Size By Fuel (Gas, Electric, Solar Powered), By Application (Golf Courses, Commercial Services), Industry Analysis Report & Forecast, 2023 – 2032*. Gminsights.com. https://www.gminsights.com/industry-analysis/golf-cart-market?gclid=CjwKCAjw04yiBhApEiwAJcvNoaZDquD5l_Dni6aQje67fye9gWP4WK-bo-BlrrSaLdgKu9l23Pwy4hoCQHQQAvD_BwE

Global Newswire. 2023, Apr. 6. *With Electrification and Automation Making Strides in Golf Cart Market, Sales to Exceed US\$ 5.4 Billion Mark by 2031*. Globalnewswire.com. <https://www.globenewswire.com/en/news-release/2023/04/06/2642517/0/en/With-Electrification-and-Automation-Making-Strides-in-Golf-Cart-Market-Sales-to-Exceed-US-5-4-Billion-Mark-by-2031.html>

³ Coherent Market Insights Pvt. Ltd. 2023, Apr. 7. *Golf Cart Market 2023 Regional Analysis, Industry Growth, Size, Share and Forecast 2030*.

⁴ <https://www.einpresswire.com/article/626676760/golf-cart-market-2023-regional-analysis-industry-growth-size-share-and-forecast-2030-club-car-llc-cruise-car-inc>

The key players in the Golf Cart market are Yamaha Golf-Car Company, Textron Specialized Vehicles Inc., Club Car LLC, Lvtong New Energy Electric Vehicle Technology Co., LTD, and HDK Electric Vehicle.

Our competitive advantage over all those major Golf Cart companies will be our exclusive graphene battery technology. None of those companies have their own battery technology. They are reliant on whatever new technology comes into the marketplace to incorporate into their Golf Cart designs.

As of 2020 the all-electric segment of the Golf Cart market had reach over 80% and is still growing.⁵ We predict that over the next decade nearly all, if not all, gas powered Golf Carts will no longer be produced.

Qpacity could have made the choice to simply start out as an OEM battery distributor to those companies. The strategic decision was to create and build our own Golf Carts through a subsidiary company (GreenSpeed Technologies) as the first stage of the business plan. After getting significant market recognition for our unique technology and an interest by the other Golf Cart manufacturers in our graphene battery, GreenSpeed will open up into the OEM battery market. There is also a significant battery after-market GreenSpeed will be able to serve from the outset.

We estimate that there are currently about 440,000 new golf carts built and sold each year based on the current market size of \$4.4 Billion divided by the average Golf Cart price of \$10,000.⁶ Based on that we can estimate the current OEM battery market potential to be 440,000 batteries, which would be divided between batteries for gas engine Golf Carts and larger batteries for all electric and solar Golf Carts. This OEM market will grow at the same pace as the overall Golf Cart market as cited above. We estimate the OEM battery market for all-electric Golf Carts in 2024 to be \$558 million and will grow to over \$800 million by 2030.

The battery aftermarket is primarily the starter batteries for gas powered golf carts. However, over time as the lithium batteries currently used in all-electric golf carts reach the end of their life, that market will also grow for us. We estimate at least 2,000,000 golf carts are in operation today and the majority exist in the U.S. This supports our modest estimate of selling aftermarket batteries in the first year equal to nearly \$5 million and grow to \$27 million by 2030.

⁵ Fortune Business Insights. 2022, Feb. *The global golf cart market is projected to grow from \$1.69 billion in 2021 to \$2.55 billion in 2028 at a CAGR of 6.0% in forecast period, 2021-2028.* Fortunebusinessinsights.com.
<https://www.fortunebusinessinsights.com/golf-cart-market-106337>

⁶ We did not find any reliable and precise average golf cart price research data. However, we found numerous anecdotal information we believe provides sufficient and reliable enough estimates, which is how we arrived at \$10,000 as the current average. Below are two sources of that data.

C. Jooste. 2022, Oct. 7. Blog: *How Much Is A Golf Cart? A Guide for Buying New or Used.* GolfSpan.com.
<https://www.golfspan.com/how-much-do-golf-carts-cost>

Revel 42 Golf Carts & Power Sports. 2022, Jun. 28. Blog: *How Much Do Golf Carts Cost? (Updated For 2023)* Revel42.com.
<https://www.revel42.com/blog/how-much-do-golf-carts-cost-updated-for-2023--4976>